

# 6LM8

## Medium-Mu Triode— Semiremote-Cutoff Pentode

### 9-PIN MINIATURE TYPE

#### SEPARATE CATHODE BASE-PIN CONNECTIONS

For Color and Black-and-White TV Receivers. Pentode Unit is Particularly Suited for Burst-Amplifier Circuit in Color TV. Triode Unit is Useful as a General-Purpose Amplifier.

#### Electrical:

##### Heater Characteristics and Ratings:

Voltage (AC or DC) . . . . .	6.3 ± 0.6	volts
Current at heater volts = 6.3 . . . . .	0.450	amp
Peak heater-cathode voltage (Each unit):		
Heater negative with respect to cathode . . . . .	200 max.	volts
Heater positive with respect to cathode . . . . .	200 <sup>a</sup> max.	volts

##### Direct Interelectrode Capacitances:<sup>b</sup>

##### Triode Unit:

Grid to plate . . . . .	1.8	pf
Input: $G_T$ to $(K_T, K_P + G_{3P} + IS, H)$ . . . . .	3.2	pf
Output: $P_T$ to $(K_T, K_P + G_{3P} + IS, H)$ . . . . .	1.9	pf

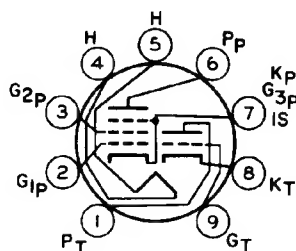
##### Pentode Unit:

Grid No.1 to plate. . . . .	0.015 max.	pf
Input: $G_{1P}$ to $(K_P + G_{3P} + IS, G_{2P}, H)$ . . . . .	5.5	pf
Output: $P_P$ to $(K_P + G_{3P} + IS, G_{2P}, H)$ . . . . .	3.8	pf
Heater to cathode (Each unit) . . . . .	3.2	pf

#### Mechanical:

Operating Position. . . . .	Any
Type of Cathodes. . . . .	Coated Unipotential
Maximum Overall Length. . . . .	2-3/16"
Maximum Seated Length. . . . .	1-15/16"
Length from Base Seat to Bulb Top (Excluding Tip). . . . .	1-9/16" ± 3/32"
Diameter. . . . .	0.750" to 0.875"
Dimensional Outline . . . . .	See General Section
Bulb. . . . .	T6-1/2
Base. . . . .	Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW. . . . .	9AE

- Pin 1—Triode Plate
- Pin 2—Pentode Grid No.1
- Pin 3—Pentode Grid No.2
- Pin 4—Heater
- Pin 5—Heater
- Pin 6—Pentode Plate
- Pin 7—Pentode Cathode,  
Pentode Grid No.3,  
and Internal Shield
- Pin 8—Triode Cathode
- Pin 9—Triode Grid



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DATA 1  
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# 6LM8

## AMPLIFIER — Class A<sub>1</sub>

	Triode Unit	Pentode Unit	
<b>Characteristics:</b>			
Plate Voltage. . . . .	125	125	volts
Grid-No.2 Voltage. . . . .	—	125	volts
Grid-No.1 Voltage. . . . .	—1	—2	volts
Amplification Factor . . . . .	46	—	
Plate Resistance (Approx.) . .	5400	150000	ohms
Transconductance . . . . .	8500	6000	μmhos
Plate Current. . . . .	13.5	12	ma
Grid-No.2 Current. . . . .	—	4	ma
Grid-No.1 Voltage (Approx.) for plate $\mu_a = 10$ . . . . .	—8	—14	volts

### Maximum Ratings, Design-Maximum Values:

Plate Voltage. . . . .	330 max.	350 max.	volts
Grid-No.2 (Screen-Grid) Supply Voltage . . . . .	—	330 max.	volts
Grid-No.2 Voltage. . . . .	See Grid-No.2 Input Rating Chart at front of Receiving Tube Section		
Grid-No.1 (Control-Grid) Voltage:			
Positive-bias value. . . . .	0 max.	0 max.	volts
Grid-No.2 Input:			
For grid-No.2 voltages up to 165 volts. . . . .	—	0.55 max.	watt
For grid-No.2 voltages between 165 and 330 volts. . . . .	See Grid-No.2 Input Rating Chart at front of Receiving Tube Section		
Plate Dissipation. . . . .	2.5 max.	2.5 max.	watts

### Maximum Circuit Values:

Grid-No.1-Circuit Resistance:			
For fixed-bias operation . .	0.5 max.	0.25 max.	megohm
For cathode-bias operation .	1 max.	0.5 max.	megohm

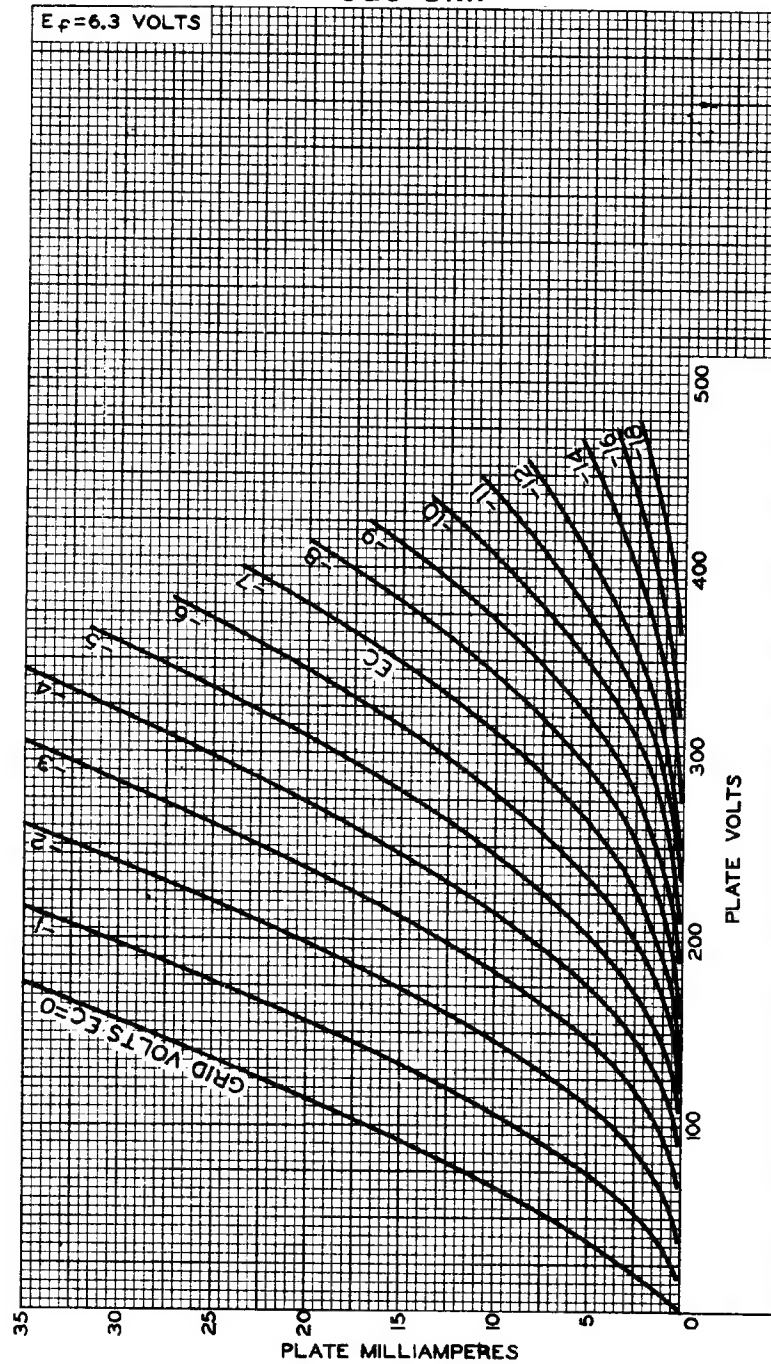
<sup>a</sup> The dc component must not exceed 100 volts.

<sup>b</sup> With external shield JEDEC No.315 measured in accordance with EIA Standard RS-191-A.



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## AVERAGE PLATE CHARACTERISTICS Triode Unit



92CM-1042IRI

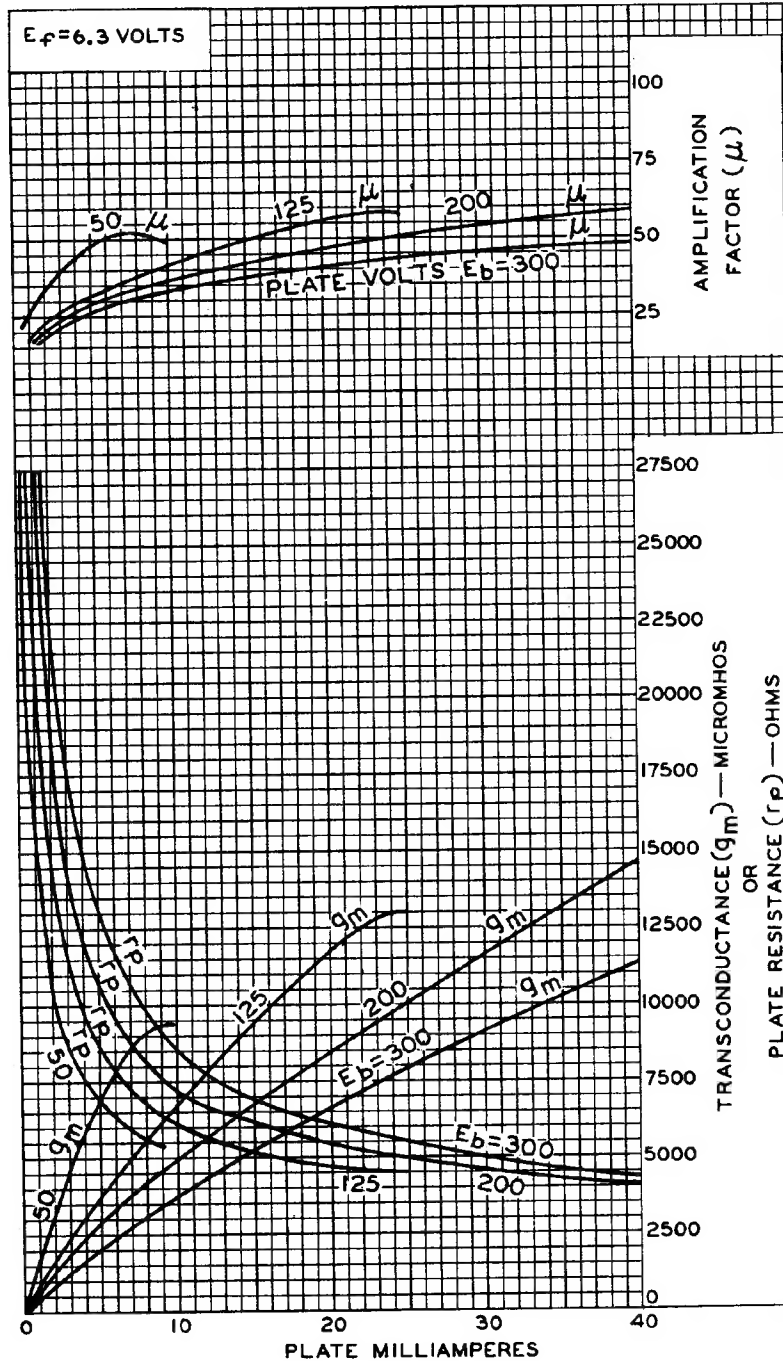


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## AVERAGE CHARACTERISTICS Triode Unit



92CM-10428

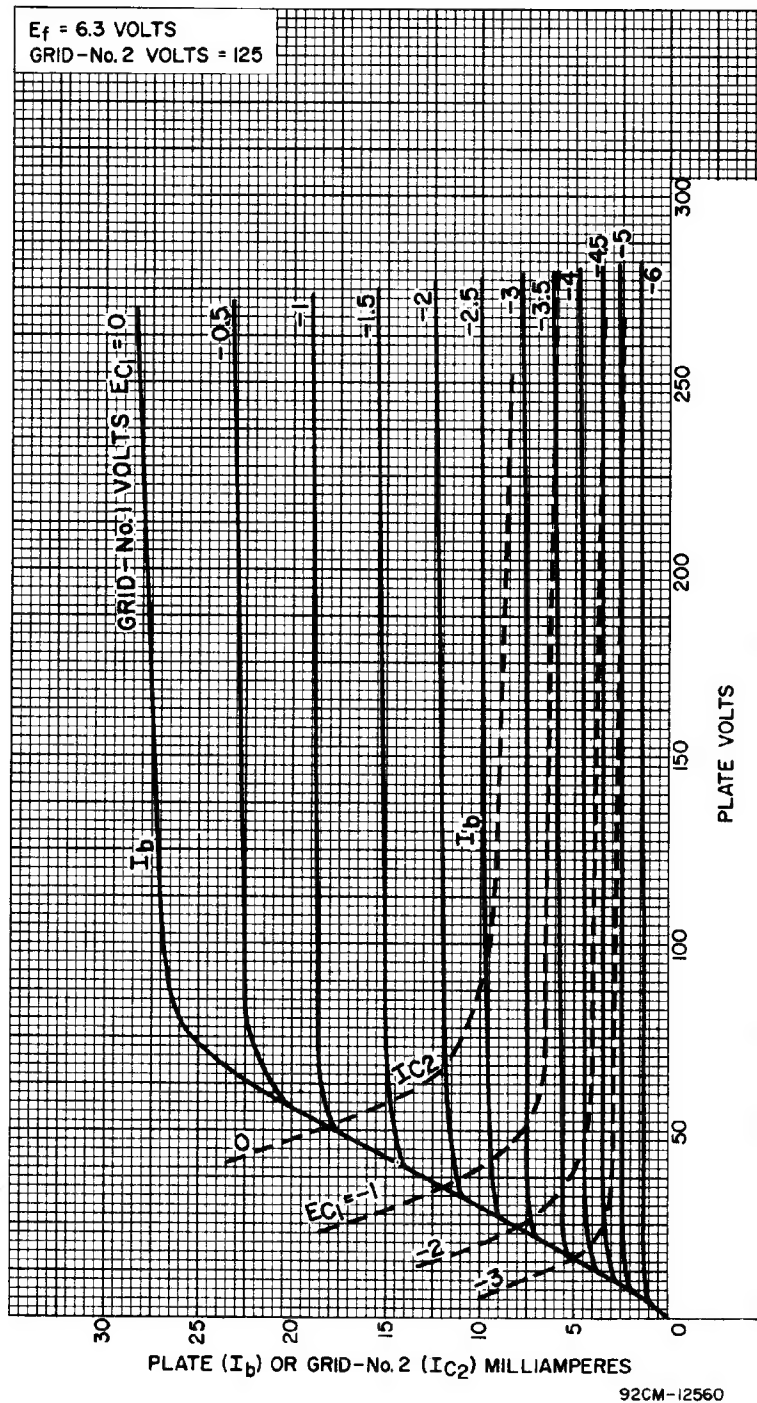
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## AVERAGE CHARACTERISTICS Pentode Unit

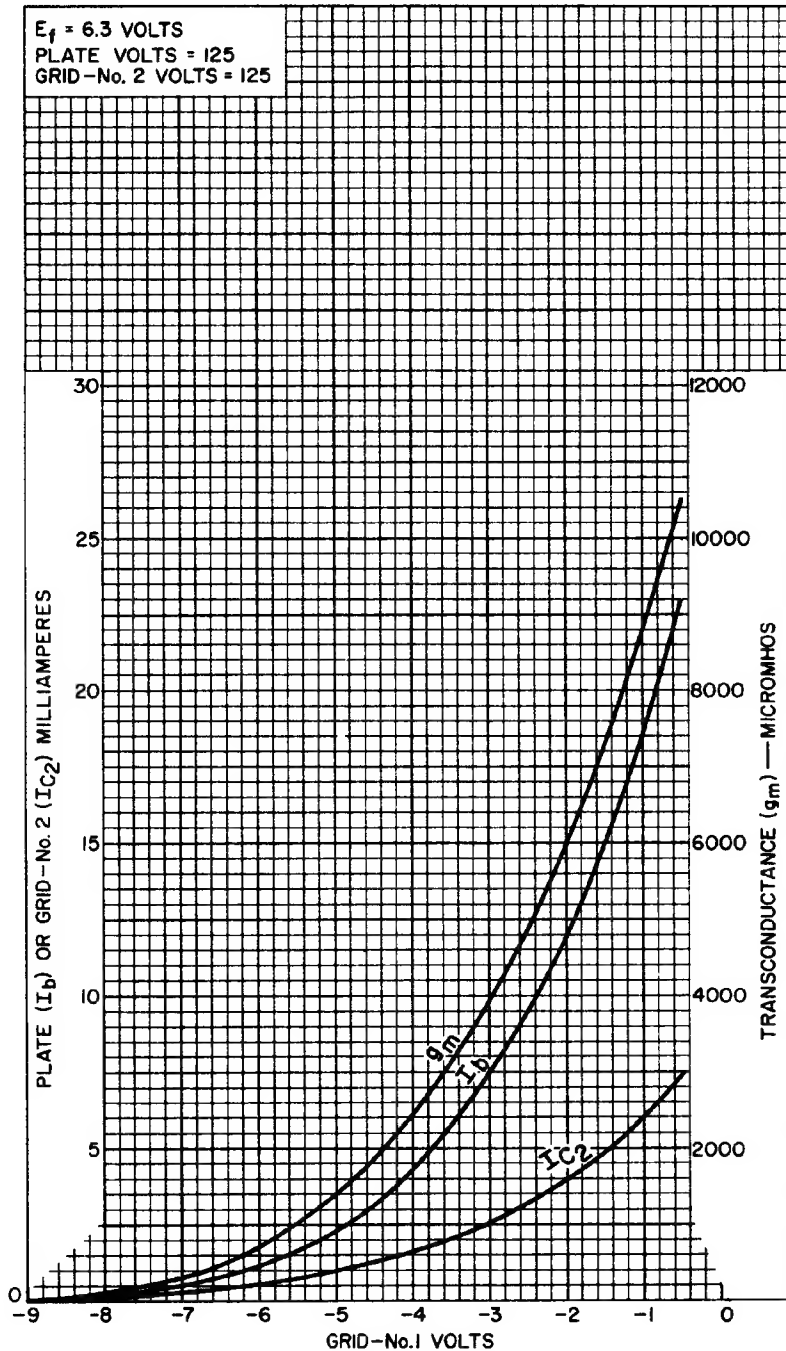


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DATA 3  
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## AVERAGE CHARACTERISTICS Pentode Unit



92CM-12558

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